

REMARKS

Entry and consideration of this Preliminary Amendment are respectfully requested prior to or concurrent with calculation of the filing fees.

The present application is a division of parent application U.S. Serial No. 10/395,092, filed March 25, 2003 which, in turn, is a division of application No. 09/865,692, filed May 29, 2001. Accordingly, a cross-referencing statement has been added to the specification.

By this Preliminary Amendment, claims 1-12, 16 and 18-20 have been cancelled leaving claims 13-15, 17 and 21 pending. Claim 21 has been amended to make a grammatical correction. The scope of claim 21 is not changed.

Applicants respectfully request entry of this Preliminary Amendment.

Respectfully submitted,

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LISTING OF THE CLAIMS

Claims 1-12 (Canceled)

Claim 13 (Original) A low-distortion power amplifier comprising:

- a combining circuit for combining an input signal with another signal;
 - a power amplifier for receiving an output signal of the combining circuit;
 - a divider for branching an output signal of the power amplifier into plural branched signals;
 - a distortion extraction circuit for extracting a distortion signal from one of the branched signals;
 - an amplitude frequency characteristic adjustment circuit for varying an amplitude frequency characteristic of the distortion signal; and
 - a vector adjustment circuit for varying an amplitude and a phase of the distortion signal that is output from the amplitude frequency characteristic adjustment circuit,
- wherein an output signal of the vector adjustment circuit is input to the combining circuit as said another signal and the other branched signal is output from the low-distortion power amplifier.

Claim 14 (Original) A low-distortion power amplifier comprising;

- a combining circuit for combining an input signal with another signal;
- a power amplifier for receiving an output signal of the combining circuit;
- a divider for branching an output signal of the power amplifier into plural branched signals;
- a distortion extraction circuit for extracting a distortion signal from one of the branched signals;
- at least two filter circuits for separating the distortion signal into distortion signals having different frequencies; and

at least two vector adjustment circuits for varying amplitudes and phases of the distortion signals that are output from the respective filter circuits,

wherein a signal obtained by combining together output signals of the vector adjustment circuits is input to the combining circuit as said another signal and the other branched signal is output from the low-distortion power amplifier.

Claim 15 (Original) A low-distortion power amplifier comprising:

a combining circuit for combining an input signal with another signal;

a power amplifier for receiving an output signal of the combining circuit;

a divider for branching an output signal of the power amplifier into plural branched signals;

a distortion extraction circuit for extracting a distortion signal from one of the branched signals;

at least two filter circuits for separating the distortion signal into distortion signals having different frequencies;

at least two amplitude frequency characteristic adjustment circuits for adjusting amplitude frequency characteristics of the distortion signals that are output from the respective filter circuits; and

at least two vector adjustment circuits for varying amplitudes and phases of distortion signals that are output from the respective filter circuits,

wherein a signal obtained by combining together output signals of the vector adjustment circuits is input to the combining circuit as said another signal and the other branched signal is output from the low-distortion power amplifier.

Claim 16 (Canceled)

Claim 17 (Original) The control method for the low-distortion power amplifier according to any one of claims 13 to 15, comprising the steps of:

detecting a magnitude of the distortion signal that is output from the distortion extraction circuit; and

controlling at least one of the amplitude frequency characteristic adjustment circuit or circuits and the vector adjustment circuit or circuits so as to minimize the detected magnitude of the distortion signal.

Claims 18-20 (Canceled)

Claim 21 (Currently Amended) A predistortion circuit comprising:

a divider for branching an input signal into plural branched signals;

a delay circuit for delaying one of the branched signals by a predetermined delay time;

a distortion generating circuit for receiving the other branched signal and for generating a distortion signal;

a vector adjustment circuit for varying an amplitude and a phase of the distortion signal; and

an amplitude frequency characteristic adjustment circuit for varying an amplitude frequency characteristic of the distortion signal that is output from the vector adjustment circuit; and

a combining circuit for combining an output signal of the delay circuit and an output signal of the vector adjustment circuit.